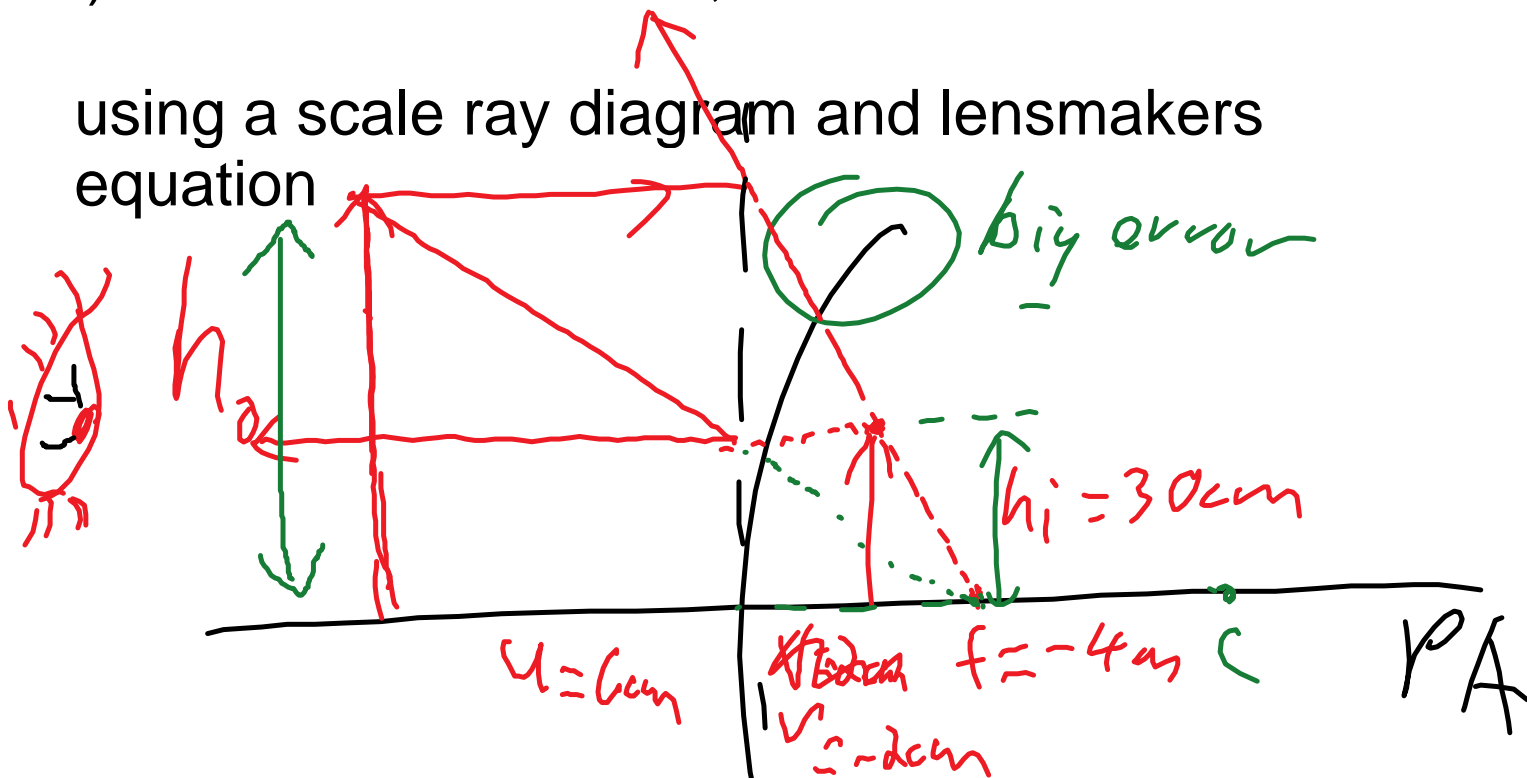


eg. 1. You shine a filament lamp, with a 7.5 cm filament, 6.0 cm from a curved mirror. Determine the size, location and type of image if

- a) it is a convex mirror,  $f = -4.0$  cm
- b) it is a concave mirror,  $f = 4.0$  cm ←
- c) it is a concave mirror,  $f = 10.0$  cm

using a scale ray diagram and lensmakers equation



$$\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$$

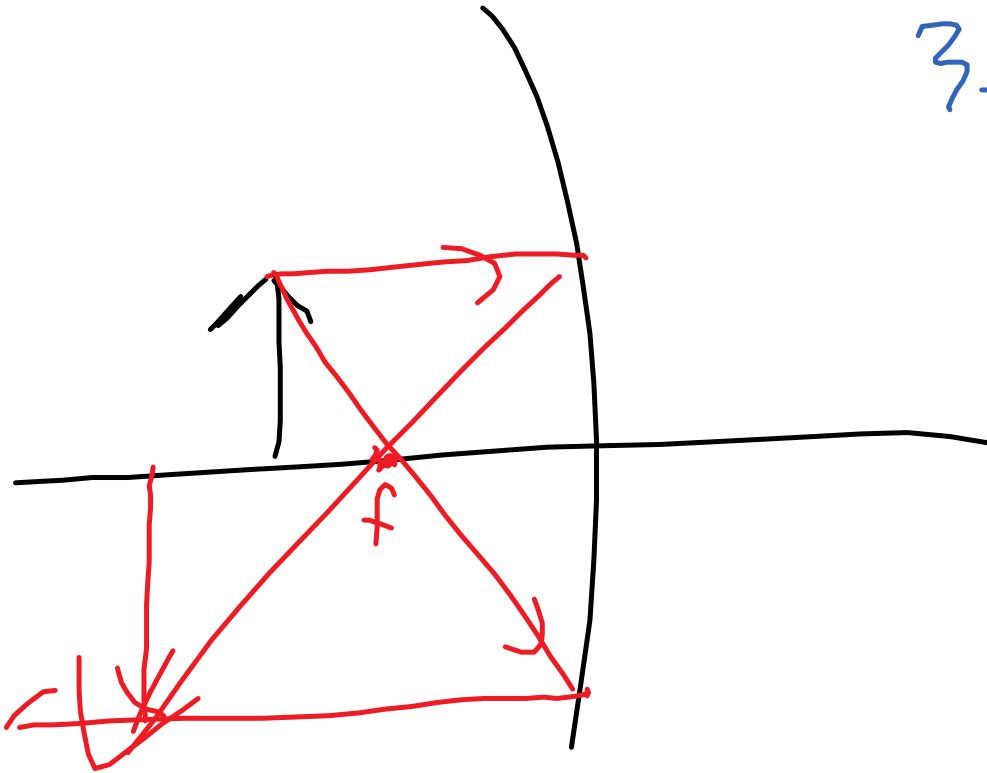
$$\frac{1}{-4} = \frac{1}{6} + \frac{1}{v}$$

$$v = \frac{-12}{5} = -2.4 \text{ cm}$$

$$h_i = h_o \times \frac{-v}{u} = 7.5 \times \frac{2.4}{6}$$

$$= \text{[scribbled out]}$$

~~3.0cm~~  
3.0cm



- real - made by light rays

